

What is claimed is:

1. An apparatus for shifting a reference distance of a laser displacement sensor, wherein the apparatus is mounted on the laser displacement sensor provided with a laser beam source for generating a laser beam and a laser beam reception member, the apparatus comprising:

a transparent member having a refraction index being different from a refraction index of an air; and

a holder for supporting the transparent member in such a way that the transparent member is placed in an optical path of the laser beam;

wherein the transparent member changes a reference distance of the laser displacement sensor by changing the optical path of the laser beam.

2. The apparatus as recited in claim 1, wherein the holder supports a plurality of transparent members having a thickness different from each other.

3. The apparatus as recited in claim 2, further comprising a holder driving member for physically moving the holder in such a way that one of the plurality of transparent members is selectively placed in the optical path of the laser beam.

4. The apparatus as recited in claim 3, wherein the

holder supports the plurality of transparent members in a radial direction and the holder-driving member rotatably moves the holder.

5           5.    The apparatus as recited in claim 4, wherein the transparent member is made of a material having a refraction index being larger than a refraction index of an air.

10           6.    The apparatus as recited in claim 4, wherein the transparent member having a refraction index larger than a refraction index of an air and made of a glass material in the form of a flat plane having a trapezoid cross-section.